



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND WASHINGTON
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IN REPLY REFER TO
4200
Ser Q21/257
August 19, 2021

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John C. Grimberg Co., Inc.
3200 Tower Oaks Blvd, Ste 300
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SUBJECT: CONTRACT N40080-18-C-0006, P-021 MIDDLE/HIGH SCHOOL
REPLACEMENT; RESPONSE TO AUGUST 9, 2021 LETTER

Ladies and Gentlemen,

The Government is in receipt of the letter dated August 9, 2021 in response to the Government's July 28, 2021 letter (Ser Q21/239). The Government's direction to reconstruct the Insulated Concrete Formwork (ICF) walls remains. The Government maintains that the provided design is constructible and does not intend to allow the use of conventional wall forming systems in lieu of ICF walls.

A. Additional Information Requested as part of Corrective Action Plan

The Government is requesting John C. Grimberg Co., Inc. (JCG) provide the following additional information within four (4) business days:

1. An explanation of what steps have been taken to-date to ensure the past issues with the ICF walls are not repeated.
2. An explanation of what steps will be taken before and during reconstruction of the ICF walls to ensure past issues are not repeated.
3. A summary of the various individuals and entities that JCG will involve in the corrective action plan (CAP) process and a detailed description of their respective experience regarding ICF wall construction. Include the members of the Quality Control (QC) organization in this summary. Include discussion of any specialized instruction to be provided by the selected ICF

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system manufacturer to project installers and QC staff prior to the start of the reconstruction efforts.

4. A revised baseline construction schedule that shows the estimated durations of the demolition and reconstruction process preceding the continuation of normal construction activities.

5. Details of any changes that JCG will make to the Quality Control Plan in regards to the CAP process specifically related to ICF wall demolition and reconstruction.

B. Changes to Quality Control Process

The Government intends to provide two separate notices-to-proceed (NTP): one for the demolition and one for the reconstruction of ICF walls. The NTP for the demolition is contingent upon an approved demolition plan, shoring plan, and Activity Hazard Analysis. The NTP for reconstruction of the ICF walls will require resubmitting submittals and certifications required by specification section 03 11 19.00 10. As additional clarification, the following must be performed:

1. Conduct a pre-construction meeting as required by specification section 03 11 19.00 10 paragraph 1.3.4.
2. Construct a mock-up of the ICF system as required by specification section 03 11 19.00 10 paragraph 1.3.5.

The Government recommends the following changes be made:

1. Send the QCM and any ICF related QC Specialists to manufacturer training of the selected ICF manufacturer if they do not already have this training completed.
2. Ensure the presence of the ICF manufacturer's representative periodically throughout the reconstruction. This periodicity should include the first sequence of ICF wall construction beginning from layout to formwork/rebar installation and concrete placement.
3. The Special Inspector for ICF wall-related inspections in the Schedule of Special Inspections should have prior experience with ICF wall construction.

C. Response to Contractor Suggestions

The Government addresses the following suggestions made by JCG:

1. "the concrete specification should be modified to increase the slump range such that the minimum and maximum permissible slump at point of placement is consistent with the slump ranges established by the ICF manufacturer;"

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GOVERNMENT RESPONSE: The contract specifications (03 30 00 subsection 2.3) allow for a slump range that would be consistent with slump recommendations of an ICF manufacturer.

2. “modification of the ICF specification to be consistent with standard cast-in-place concrete per the UFGS current specifications;”

GOVERNMENT RESPONSE: The Government does not intend to change the ICF specifications at this time.

3. “modification of the typical wall reinforcing detail to reflect actual locations of rebar in support chairs of ICF formwork and to allow for staggering of horizontal bars to restrain vertical bars from “drifting” in or out of the plane of the wall;”

GOVERNMENT RESPONSE: The Government does not intend to modify the typical reinforcing detail. The Government is amenable to the staggering of horizontal bars on the basis that it is a standard practice of ICF wall construction. The Government has no record of a request to stagger the bars prior to the construction of the ICF walls. This and any other instances where the manufacturer’s recommendation differ from construction details should be submitted formally via a Request for Information (RFI) for Government consideration.

4. “confirmation that non-contact lap splices are permitted, as contact lap splices are not achievable with an ICF system.”

GOVERNMENT RESPONSE: The Government confirms that non-contact lap splices are permitted as long as they constructed in accordance with applicable code requirements.

5. “modification of details of reinforcement at locations of diagonally oriented bars and stirrups due to conflicts with primary reinforcement;”

GOVERNMENT RESPONSE: The Government will review the diagonally oriented bars and stirrups. Coordinate means and methods with the ICF manufacture and provide proposed solutions via RFI.

6. “reconsideration of the rebar and forming issues posed in RFI 22;”

GOVERNMENT RESPONSE: The Government will review the RFI 22 responses again.

7. “the use of conventional forming at header beams because the ICF system chair spacing does not line up with header beam rebar placement requirements and the ICF internal plastic system impedes setting the beam bars;”

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GOVERNMENT RESPONSE: The Government determined the header beams are constructible via ICF and that the interior webbing of the ICF system can, in certain cases, be cut out or removed to facilitate rebar placement. Confirm with manufacturer for specific installation instructions.

8. “reconsideration of the rebar detailing at the beam pockets and slender wall piers between windows as the current detailing provides very little clearance for proper consolidation of concrete;”

GOVERNMENT RESPONSE: The Government will consider recommendations regarding construction of these details when they are submitted via RFI.

9. “modify the contract documents to clarify that beam pockets are to be filled and reconsider the use of expanded metal as the means of bonding the wall concrete to the beam fill;”

GOVERNMENT RESPONSE: The Government does not intend to issue new documents and has previously clarified that the beam pockets are to be filled in the RFI #252 and #252.1 responses. The Government will consider recommendations regarding construction of these details when they are submitted via RFI.

10. “the use of post-installed anchors instead of cast-in-place anchors to support steel angles at those locations where cast-in-place anchors are shown in the contract drawings;”

GOVERNMENT RESPONSE: Submit a RFI regarding this alternative approach.

11. “reconsideration of both the haunch geometry (eliminate haunch tapers) and haunch rebar/stud detailing to address issues encountered with haunch construction in the existing walls;”

GOVERNMENT RESPONSE: The Government will consider recommendations regarding construction of these details when they are submitted via RFI.

12. “incorporation into the contract documents of the roof joist positioning on the ICF wall made during the shop drawing process and confirm the repositioning of ICF wall horizontal support plates to accommodate the modified joist positions.”

GOVERNMENT RESPONSE: The Government refers to the response made to RFI #132 in which sketches were provided to address certain aspects of roof joists.

D. Other Items of Discussion

The Government disagrees with JCG’s assertion that “...by using the ICF system, the contract documents necessarily contemplate some movement in the rebar given that a hallmark

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of the ICF system is that there is no tying-off of the vertical rebar to the horizontal rebar...except at the very top of each pour." Discussions held with JCG, WDP, NAVFAC, DODEA and a representative from Nudura on August 18, 2021 revealed that it is standard practice in ICF construction to alternate placement of horizontal bars inside pre-set plastic web connections and thread vertical bars between them in order to prevent movement away from the surface of the wall. This method is also recommended in Nudura's online installation manual. Installing in this prescribed manner would obviate the need for tying vertical bars to horizontal bars and would satisfy the concern of bars shifting during concrete placement. No request to construct in this manner was received.

JCG's August 9, 2021 letter also asserts that the Government is requiring the use of the Nudura ICF system. The contract does not require the use of any particular ICF manufacturer or brand. Any submitted products must meet the performance requirements as stated in the contract drawings and specifications.

Sincerely,

FRANK G. DECKER
Contracting Officer
By direction of the
Commanding Officer